

To Dr. Warren,  
Respectfully from  
Dr. Pennington 1st  
**DISSSERTATION,** 11

ON THE  
**IMPORTANCE AND ASSOCIABILITY**

OF THE  
**Human Stomach,**  
**BOTH IN HEALTH AND DISEASE,**

DELIVERED BEFORE THE  
**VERMONT MEDICAL SOCIETY,**

AT THEIR  
**ANNUAL MEETING IN MONTPELIER,**  
*Oct. 17, 1816.*

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BY SELAH GRIDLEY, M. D.   
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MONTPELIER, OCTOBER 17, 1816.

SIR,

THE undersigned committee are charged by this society, to express to you the high sense they entertain of your dissertation, just delivered; to thank you in their behalf, and to request a copy for the ~~process~~

Yours with high esteem,

JOS. D. FARNSWORTH, *Committee*,  
JOHN POMEROY, *Committee*.

Dr. SELAH GRIDLEY, *President*  
*of the Vermont State Medical Society.*

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GENTLEMEN,

I DULY appreciate the flattering note you have presented in behalf of our Society. Nothing but a desire to yield obedience to the association, which prompted this production, can induce me to assent to its publication. The candor of my known friends, will accept it, not as the result of scientific leisure, and research, but as an assemblage of facts and deductions, hastily arranged amidst the active pursuits of

Their obedient servant,  
SELAH GRIDLEY.

Jos. D. FARNSWORTH, *Committee for*  
JOHN POMEROY, *V. S. Medical Society.*  
Montpelier, Oct. 18, 1816.

## A DISSERTATION, &c.

*BRETHREN & FRIENDS,*

WE are associated for the purpose of medical improvement. Our honorable Legislature have sanctioned the propriety of this association, by a law, which confers the right of making our own Bye-laws. In conformity to these Bye-laws, it now becomes my duty to address you, by "A dissertation, relative to the healing art." The subject I have chosen may excite surprise. I shall endeavor to prove the importance and associability of the human STOMACH, both in health and disease.

This essential organ in the living system, all admit to be necessary, as a receptacle of food to nourish the body. As a necessary cavity in an organized body, it is viewed, by many as an insensible space, like the hole of a vessel, or the hopper of a gristmill. Like the one, it is considered to contain stores in ballast, and like the other, to supply and feed this machinery with which it is connected. Anatomy and Physiology have often exhibited this viscus, merely as an organ essential to the process of digestion. To illustrate this, they have been particular in describing its structure, and its vascular connection with the surrounding viscera. The illustrious Barron Haller, whose work on physiology, for a long time stood unrivalled, although he very minutely describes

the peritoneal, the muscular, the nervous, the villous, and the cellular coats of this organ ; he says, " By the stomach, we understand a membranous vessel, or bag, of a peculiar figure, destined for the reception and further dissolution of the food."

But I shall assign to this wonderful part of the human system, another, and a nobler office. I shall consider the stomach as the seat of sensation, which, by its pains, and its pleasures, is communicated to every part of the system, by means of *sympathy* and *association*. Does any one ask, what constitutes the pleasure of existence ? I answer, it consists of a pleasant and easy action of the stomach, and other organs immediately associated with it. Do any doubt the truth of the position ? I reply, when the stomach is duly excited by food, by wine, by opium, and by tea, the highest degree of corporeal, moral and mental happiness is enjoyed. It is in this state only, that the person feels social pleasure, or exercises, in perfection, the faculties of taste, judgment and reason. In this state only, man delights in action and business, or reclines himself into rest and sleep. On the contrary, every action, defective from hunger or thirst, or deranged in the functions of the stomach, by diseases or medicines, produces a proportional degree of misery in the mind, and in many parts of the body. Hence hunger " breaks through stone walls ;" and hypochondriacs hang themselves.

Every strong emotion of the mind is felt most powerfully at the stomach. An intelligent friend, who was in several battles during our revolutionary war, assured me, that in those awful moments, when drawn up in battle array, he felt (to use his own expression) " a dreadful *whirling* at the stomach." He further assured me that the bravest soldiers in the army, uniformly told him that they experienced this distressing

sensation, and felt as though the stomach was rolling over, till they became engaged in battle ; when this sensation entirely ceased.

Similar sensations, are experienced, I believe, by every one, who has felt the sudden impulse of love, fear or terror.

The more settled and gloomy passions, are felt in a different way. Grief and sorrow produce a powerless weight and oppression at the stomach, for which nature seeks relief by raising sighs and sobs.

That unceasing sadness—that mourning without hope, which often succeeds the loss of dear and beloved friends, discovers its depressive effects upon the stomach, by impairing digestion, by diminishing its secretions, by enervating its force, and, consequently, by reducing the vigour of the whole system, until the lamp of life burns but dimly in its socket. Hence the propriety of that expression of Ossian. “Sorrow wastes away the mournful, and their days are few.” It is now easy to perceive how a peculiar state of the stomach produces the soldier’s courage, the mourner’s sobs, and the lover’s sighs.

When I contemplate the stomach as an organ, susceptible of every sensation that can affect the human system, I feel more disposed to assign to it the seat of the soul, than to affix this seat in the pineal gland of des-cartes. From a view of the sensibility of this wonderful organ, I am ready to exclaim, as Sterne did on sensibility itself, “ Source inexhaustible of all that is precious in our joys, or costly in our sorrows, it is here we trace thee !”

From time immemorial the sensibility of the stomach has been imputed to the heart. Solomon says, “ *Hope deferred maketh the heart sick ; but when desire cometh, it is a tree*

*of life.*" Similar expressions, relative to the influence of the passions, are to be found in the earliest, and in the latest writers.

It has been necessary, even in men divinely inspired, in their addresses to the human understanding, to adapt the language to the perceptions of those who are addressed. Hence we are told, in the language of scripture, that at the command of Joshua, "*the sun stood still, and the moon stayed, until the people had avenged themselves upon their enemies.*" With the imperfect knowledge of the solar system in those times, is it probable that any of the twelve tribes could comprehend the idea, that this miracle was effected by a suspension of the earth's motion, in performing its diurnal revolution, and that the moon belonged exclusively to the earth? It is not probable, that any of the children of Israel had the least conception, that the sun was a fixed luminary, around which the earth, with the other planets, was continually revolving, as first suggested by Copernicus, and afterwards demonstrated by Sir Isaac Newton. The defect of language will ever be commensurate with the imperfection of knowledge. Hence, for ages to come, as in ages past, it may be necessary to speak of the heart, as the seat of every passion, as an organ most immediately connected with the soul.

It may be necessary, even for me, should I fail of convincing you by my reasoning, of the truth of the principles advanced, to acknowledge, with humility, that it affects my heart from a disappointment.

I shall ever bow with deference to the usage of language, and to your decisions.

Will any accuse me of enthusiasm, in support of false philosophy? Permit me, in defence of such an accusation, to call

your attention for a moment to a subject, on which our writers on diseases, are very silent. I allude to the peculiar anatomical structure of the stomach. Modern anatomy and physiology, universally assign to the stomach, a *nervous coat*. Is this said of any other internal viscus? I know this must be answered in the negative. The eye, alone, has such a coat, the *retina*, formed by "the expansion of the optic nerve; the immediate seat of sensation." [Charles Bell.] This external organ obeys the stimulus of light, as the stomach, an internal organ, obeys the stimulus of food and the impulse of passion. The one perceives external objects, and the other feels the effects, which those objects produce, upon the brain, or *sensory*. Hence the sight of frightful objects produces *deliquum animi*. The stomach first indicates approaching faintness, by sickness and distress, in those frequent swoonings, which occur from copious blood-letting.

It appears that every organ in the human system, so "fearfully and wonderfully made," possesses sensibility in proportion to its supply of nerves. Mr. Munroe observes, "as all the nerves bestowed on this viscus, enter at the superior orifice of it, the sensation here must be very acute, whence Helmont imagined the mouth of the stomach, to be the seat of the soul."

Haller assures us that, "the nerves of the stomach, are both large and numerous, produced from the eighth pair, forming two complications about the oesophagus, of which the anterior and less plexus descends through the upper or outer side of the stomach to its greater curve and the posterior plexus, which is larger, is distributed through the lesser arch of the stomach: from whence it passes, together with the arteries, to the liver, pancreas, and diaphragm itself.—

These nerves may be traced into the second cellular stratum of the stomach, that surrounds its nervous tunic; in which, but more especially in the papillæ, they become obscure or lost. From their number, the stomach is extremely sensible, insomuch, that things, which make no impression upon the tongue, will nauseate and pervert this organ, which is capable of much severer pain than the intestines; as we know from infallible experience in diseases; even the skin itself, when naked by a blister, is less sensible than the stomach. By making a ligature upon the nerves of the eighth pair, both the action of the stomach, and the digestion of the food cease.

In perfect consonance with this illustrious physiologist, that accurate anatomist, Mr. Charles Bell, makes the following remark. "The cardiac orifice is the chief seat of all sensations of the stomach, both natural and unusual, as it is the most sensible part of the stomach. Indeed we might presume this much by turning to the description and plates of the nerves; for we shall find that this upper part of the stomach is provided, in a peculiar manner, with nerves, the branches of the *par vagum*."

After these quotations, from such high authority, it seems unnecessary for me, to detain my learned auditors, a moment, in describing the particular nerves which supply this sensible organ with sensibility. But, with a view of explaining the associability of the stomach, with other important organs, I claim your indulgence, while I recite the remarks of Mr. Charles Bell, on the distribution of the eighth pair of nerves. On the principal branch of this pair, the *par vagum*, this distinguished anatomist has bestowed more labour and language, than on any other nerve in the human system. After describ-

ing its origin, its recurrent branch, its various divisions and destinations, he remarks, "Thus we see that the par vagum has a most appropriate name, and that it is nearly as extensive in its connections as the sympathetic itself. It is distributed to the oesophagus, pharynx and larynx ; to the thyroid gland, vessels of the neck and heart ; to the lungs, liver and spleen, stomach, duodenum, and sometimes to the diaphragm. The recollection of this distribution will explain to us many sympathies. For example, the hysterical affection of the throat, when the stomach is distended with flatus, the exciting of vomiting by tickling the throat, the effect which vomiting has in diminishing the sense of suffocation, that state of the stomach which is found, upon dissection, to accompany hydrophobia, whether spontaneous, or from the bite of a dog."

Who will now dare assert, that any organ in the living system, possesses equal sensation and sympathy with the stomach ? What other viscus derives such immense nervous influence, directly from the brain, as does the stomach, by means of that important branch of the eighth pair of nerves, the par vagum ?

The heart itself, so often styled the seat of life, is compelled to obey every impulse upon the stomach, whether it be from foreign stimuli, or the force of passion. The heart is a muscle ; and Mr. John Bell asserts, that "there is not in the human body any part in which the muscular substance is so dense and strong." "In all creatures it survives, for a long time, the death of the body ; for when the creature is dead, and the breathing and pulse have long ceased, and the body is cold, when the other muscles of the body are rigid, when the stomach has ceased to feel, when the bowels, which preserve their contractile power the longest, have ceased to

roll, and they also feel no more, still the heart preserves its irritability ; it preserves it when torn from the body and laid out upon the table ; heat, caustics, sharp points excite it to move again." (p. 25—vol. 2d.)

Xavier Biehat, in his physiological researches, remarks, " Every observation appears to prove, that there is no direct influence exercised by the brain over this organ (the heart,) but that, on the contrary, as we have seen, it holds the former organ under its immediate control, by means of the motion which it communicates to it." (page 270.)

" In palpitations, and in various irregular motions of the heart, the principle of these derangements is not observed to exist in the brain, which is then perfectly unaffected, and continues its action as usual. Cullen was deceived in this, as on the subject of syncope. (page 271.)

Every organ subject to the direct influence of the brain, is of consequence voluntary. But I believe, notwithstanding the observation of Stahl, no person ranks the heart among this kind of organs. What would life be, if we could suspend, at will, the motion of the organ which animates it?" [page 271.]

From these, and many other high authorities, we perceive, that the heart is the most independent of any organ of the body, in its relation to the brain ; that it has no direct communication by any particular nerve, or pair of nerves, and therefore not under the influence of the will ; that it acts by a *vis insita* peculiar to itself, and being supplied with small branches of nerves, from sundry pairs, it is actuated less by the brain, than by the blood in its ventricles.

On the contrary, the *stomach* being supplied with nervous influence, by sources almost as various and numerous as the heart itself, has in addition, a direct intercourse with the brain, by means of that important nerve, the *par vagum*. In this way every painful and pleasurable sensation in the stomach, is felt in the brain. These two important organs in the living system, appear to act and react upon each other,

as steadily and constantly, as is consistent with the laws of matter and motion. The brain reciprocates to the stomach, every effect produced by plenty and fulness, or poverty and want.

In a state of easy health, a suitable degree of stimulus on the stomach, affords cheerfulness, joy and tranquility. A still higher degree of stimulus, such as wine and ardent spirit, inspires gaiety, hilarity and merriment; and the excess of diffusible stimuli on the stomach, produces, by a direct influence on the brain, those ideas of extravagance and absurdity, which are manifested by folly and madness. Hence intemperance, united with vile company and conversation, pervert the understanding, while fasting and solitude, by lowering the excitement of the stomach, and of course, diminishing the force of depraved passions upon the brain, improve the moral principles of mankind.

If, Brethren, the foregoing facts, and my reasoning upon them, be correct; if such are the wonderful functions, and amazing influences of the stomach upon the system, in a state of health, how vast must be its influence and derangement in a state of disease.

To demonstrate this immense influence and derangement, in general diseases, I have adduced these preliminary observations, which, to you, may probably appear equally tedious and useless.

But I claim your indulgence while I endeavour to elucidate the manner in which this vital organ discovers its sufferings, in various diseases.

I shall, firstly, make some remarks on those diseases, in which the stomach appears to be the seat of suffering and distress.

Secondly, aim to establish the principle that the *stomach* is an organ primarily affected, in most diseases where other organs, usually deemed the seat of morbid action, are principally affected by means of sympathy and association, as may appear both from the causes and the cures.

Thirdly, state a few facts relative to the analogous effects of certain substances, on the *stomach*, and on remote parts, as employed in surgery. Some of the diseases, in which the *stomach* itself is the seat of distress, are *Cardialgia*, *Gastrodynia*, *Hiccup*, *Ineubus*, *Dyspepsia* and *Hypocondriasis*.

It is somewhat remarkable that *Cardialgia*, should, by many, be called *heart-burn*. The intelligent people, who are neither influenced by finespun theories, nor nice anatomical distinctions, appear to consider the heart and the *stomach*, as synonymous. Hence that burning sensation at the *stomach*, produced by activity and indigestion is styled *heart-burn*, and that pain at the *stomach*, occasioned by mental distress, is termed *heart-ache*.

In *gastrodynia* and *hiccup*, a peculiar debility occurs at the *stomach*. The *hiccup* is often relieved by a sudden emotion of the mind. This fact illustrates the direct and powerful influence of the brain upon the *stomach*, through the medium of the passion. The *ineubus*, or *night-mare* is, by almost every writer, supposed to be occasioned at times by a heavy supper, and by indigestible food, and yet many of them believe it to be an affection of the heart and lungs. Doctor Darwin remarks, "Now as the action of respiration is partly voluntary, this complaint may be owing to the irritability of the system being too small to carry on the circulation of the blood through the lungs, during sleep, when the volun-

“tary power is suspended.” Doctor Rush, on this subject, has the following observations, “This disease is induced by “a stagnation of the blood in the brain, lungs, or heart. It “occurs when sleep is more profound than natural. Its re-“mote causes are the same as of dreams. To these may be “added sleeping upon the back, by which means the blood “is disposed to stagnate in the places above mentioned, from “an excess or diminution of the force that moves it.” These high and respectable authors, however, may be incorrect in opinion. The pulsation of the arteries should be noticed during a fit of the night mare, with a view to prove a suspension of the circulation of blood, through the heart and lungs. I have no knowledge that any one ever felt for the pulse during one of these paroxysms. Humanity would seem to forbid the inquiry, because waking the sufferer affords speedy relief. Motherby, in his dictionary, gives a different view of the nature of this disease. He says, “This disorder hath “generally been supposed to proceed from a stagnation of “blood in the brain and lungs; but it is a nervous affection, “and rises chiefly from indigestion. Hence we observe, that “those with weak nerves, who lead sedentary lives, and feed “heartily, are the most commonly affected with it. Dr. “Whytt says that he generally found a glass of brandy a “cure, if taken at bed time.” See *Incubus*.

Almost all diseases, when termed nervous affections, are accompanied by a weakened state of the stomach. It is, in my opinion, an impaired action of the stomach alone, that constitutes night-mare. Perhaps the most eligible method of discovering unknown cause, is from known effect. Dr. Whytt relieved the sufferer by brandy. I have done the same by spirits of turpentine. Does a heavy supper occasion *incubus*? So does a full meal produce drowsiness. The cause

is the same in both cases. All the sensorial power is directed to the stomach, to carry on those secretions necessary to digest the food, and too little is left to supply the locomotive muscles. In the one case, there is a temporary suspension of the sensorial principle to the muscles, moved by volition; and in the other a diminution of it. The moment you rouse this principle powerfully to the voluntary muscles, as by surprise, relief is obtained. If a person who has a weak stomach, indulges that drowsiness produced by a full meal, in sleep for one hour, he usually feels, on waking, an oppression at the stomach, resembling that indescribable distress which is felt on being roused from the night-mare.

But this distress may be prevented in either case, by avoiding the causes producing it, and by keeping the stomach suitably excited by food and stimulus, and tonic remedies. I will not assert that *incubus* never ends in death. If it does, however, it demonstrates, what immense controul the stomach holds over the heart and lungs. I trust no one will deny that *dispepsia* is a disease of the stomach. The extreme cases of this disease, are ever attended with extreme debility of the whole nervous and vascular system. The sufferers have uniformly a weak pulse.

This fact furnishes another proof, among a thousand that might be adduced, of the amazing sympathy existing between the stomach, the brain, and the heart.

I have seen many deplorable cases of *dispepsia*, from large draughts of cold water, taken when the body was excessively heated in the summer months. Who does not know that this imprudence has often occasioned sudden death? Who does not know, that these fatal effects have often been prevented, by previously stimulating the stomach highly with

ardent spirit? All of you know the value of that important direction of our illustrious countryman, Professor Rush, in these awful cases, attended with dreadful spasms upon the stomach, to give "a large dose of liquid Laudanum." When these spasms are overcome, by the highest stimulant remedies on the stomach, a sad scene succeeds. All the effects of debility are felt in every part of the system. A similar debility of the stomach, and of course, upon the nervous system, and upon the heart and arteries, is experienced, when a man suffers the united effects of extreme heat and fatigue. When a man so suffers, the people usually say, "he has melted himself." I wish not to spend a moment in confuting the absurdity of this idea, but I mourn over that wretchedness which these debilitating causes produce. So languid are the body and mind in these cases, that the unhappy sufferers, probably feel, at times, as though nature itself were dissolving. Hence some may have believed, that they had been melted, and of course, incurable.

The best remedy with which I am acquainted, in these cases, is the American *Bloodroot*. I learnt this practice from my learned preceptor in medicine, the late Doct. Lemuel Hopkins. He commonly prescribed an infusion of the fresh root in spirits, with some castor, and directed a sufficient quantity to produce some *nausea* three times a day. He used to observe, that this medicine created an uncommon *thrilling* through every nerve of the body.

More than twenty years experience, confirms my judgment in the superior efficacy of this remedy. I have often employed the tincture of bloodroot alone, with the same happy result. Believing in the peculiar properties of this root to rouse the torpor of the stomach in *dispepsia*, I have often

added a small portion of it, with some bark, to common and aromatic bitters.

Every case of extreme debility of the stomach, whether produced by hurtful causes, directly applied to this organ, or to the system generally, affects the bowels, necessarily, from their immediate connexion. Hence dispeptic patients, are usually troubled either with costiveness, or diarrhoea, or with both alternately.

The *hypochondriasis*, appears to me, to be a disease of the stomach. Like dispepsia and hysteria, it is often denominated the *spleen*. This idea appears to be derived from the ancients. And why? They discovered this *viscus* lying contiguous to the stomach, and connected with it, by blood-vessels. Mankind have ever been prone to ascribe the source of their sufferings to almost any thing, but the true cause. The ancients were puzzled to ascertain the use of the spleen, and therefore viewed it as the cause of much evil, and the seat of many diseases. And what is this wonderful spleen? It is a vascular substance, with few nerves, and little sensibility. It is a reservoir of blood, subservient to the stomach in its varying state of emptiness and fullness. By participating with the stomach, in its sufferings, it may become diseased in hypochondriasis.

If this is not a disease of the stomach, then what and where is it? Is it wholly a disease of the mind? Then reason ought to be the cure. Now we all know, that, like other diseases, it is dependent on, and removed by, physical causes. Its cause is similar to that of dispepsia. The one affects the sanguine, and the other, the melancholic temperament. The cure of course must be different. Doctor Cullen has made a nice and just distinction between these diseases.

While the one consists of debility, the other is a fixed torpor of the stomach and adjacent and dependant viscera. I have endeavored to shew, that emotions of the mind have a powerful influence on the stomach. In this way, the stomach is often roused from its torpor, and the hypochondriac is relieved. Van Sweitan relates some pleasing anecdotes of this kind. His story of the man who imagined his legs were straw, is not the least amusing and instructive. The poor hypochondriac, being impelled by fear, to use his straw legs in running to escape from supposed highway-robbers, placed there by his sagacious physician, for that purpose, had this torpor, and this insane idea removed together, which returned no more. In this way, I apprehend, many cases of insanity have been cured by the influence of fear and terror, as in our hospitals and work houses, and by half drowning. We are compelled to accomplish the same thing, in country practice principally, by overcoming this torpor, with emetic and cathartic remedies.

It now becomes my duty to shew how the stomach is primarily affected, in many diseases, supposed to have their seat in other organs, which appear to suffer chiefly by sympathy and association, with this organ.

Some of these are the nervous and sick head-ache; the gout, the gravel, and some cases of asthma, diabetes, and palpitation of the heart.

The nervous head-ache is usually attended with a weakened and torpid state of the stomach, and of course, with a weak pulse. It often comes on with a pain over one eye, especially in the morning, after the person suffers some exhaustion from fatigue, before the stomach is suitably supported by the morning repast. When the system is refreshed by sleep and

rest, some relief is obtained. But the same scene is again repeated the next day, and often continues for many days or weeks.

The sick head-ache is often induced by extreme fatigue, and abstinence from food. The fluids of the stomach are often of an acid nature, but sometimes become bitter by continual puking, which sometimes occurs. In both these forms of head-ache, the stomach appears to suffer much less than the head.

The gout, we know, is most frequently produced by that intemperance in fermented liquors only, which of necessity, affects firstly the stomach. Although the feet and hands first announce the existence of this disease, by twinging pains, the stomach, at last, unable to shew its sufferings by pains in the extremities, is overpowered by pain and distress in itself, when the disease terminates in death.

The asthma is sometimes induced suddenly by a full meal and by hysteria. In all cases of hysteria, the stomach is much affected.

A temporary diabetes is often occasioned by taking certain substances into the stomach, such as acids, and sweet articles which soon run into the acid fermentation. Maple sap and maple sugar, have this peculiar effect on many persons. In these cases, an increased secretion occurs too suddenly to be accounted for in any other way, but by the laws of association. The diabetes hysterius, has been well understood, from the days of Sydenham to Doctor Rush.

Many cases of palpitation of the heart, appear to be nothing but an associate action with the stomach from debility. Mr. John Bell ridicules certain practitioners, who, in some

cases he cites, gave over their patients to death, because they failed of relieving palpitation, by blood-letting. The present celebrated Burns, states some cases of palpitation, suddenly induced by that debility occasioned by abortion.

The gravel bears some analogy to the gout. Both seem to be produced by taking fermented liquors into the stomach. Those who drink cold water, or even spirit and water only, are seldom affected by either. These diseases seldom or never occur with the aborigines of America, who use neither beer, cider, nor wine.

Having mentioned these diseases, with some reference to the causes which produce them, I shall endeavour to show how far they are, primarily, diseases of the stomach, by the effect of remedies, best adapted to their cure.

The nervous head-ache, or as our citizens sometimes style it, the sun head-ache, is easily, and certainly cured by a mild emetic, and the justly celebrated *Fowler's mineral solution*. This last medicine, has never failed, in my hands, to effect a cure in five days. I have employed it several years, with a weak solution of either vegetable or mineral alkali, and as soon as permanent nausea is produced, the pain abates in the head, and returns no more, for a long time, and if it ever occurs again, it manifestly appears to be the effect of those causes which debilitate the stomach.

The sick head-ache is best relieved, during a paroxysm, as I believe, by taking into the stomach, bitter and alkaline substances, by tea, by rest and sleep. On its first approach, a paroxysm has sometimes been suspended by a dose of opium or black pepper. It is best prevented by avoiding its occasional causes, and by invigorating the stomach, by means of

the tincture of blood-root, and cinchona, by alkalies, by Fowler's solution, and by long journeys.

The gout and the gravel are oftener prevented than cured. I shall therefore say but little on these diseases. But I beg leave to remark, that the peculiar stimulus of opium on the stomach, affords immediate relief to the most exruciating tortures of the foot, in some paroxysms of the gout. If any doubt this, let them consult John Brown's elements of medicine. If there be any permanent cure for the gravel, it will probably be found in alkali. The aerated vegetable alkali, and soda have long been tried with success. Experience confirms the propriety of abstaining from the use of fermented liquors in this disease. Now, if we reject the old humoral pathology from our theory of diseases, how shall we account for these facts? To me, it appears plain, that a peculiar state of the fluids of the stomach, favors the production and removal of this disease.

The asthma is sometimes relieved, very suddenly, by an emetic. It will be recollect that the par vagum supplies both the stomach and lungs with nerves. Hence sweet oil, demulcent drinks, lobelia, squills, digitalis, antimonials, calomel, opium, and fifty other articles, of different and opposite qualities, relieve both cough and asthma. I have seen a hysterical asthma, overcome in a moment, by a dose of ether. Some cases of asthma have yielded at once, to the powerful influence of Fowler's solution.

The diabetes is sometimes cured. I have known more than one instance, of long duration, radically cured by tincture of cantharides. One of the cases, soon changed to a fatal pulmonary consumption.

The justly celebrated Doctor Samuel L. Mitchel, whose fame is extensive as the world, for his researches and rea-

sioning, on the use of alkalies, in neutralizing the *septic acid* in the stomach, and correcting other noxious fluids, assures us that *lime water* has cured the diabetes. He alludes particularly to that species, which, in the western part of the State of Newyork, is occasioned by the use of maple sugar. During the year past, I gave a pill composed of *fel suillae* and extract of gentian, to the great advantage and satisfaction of a severe sufferer, in this disease.

The diabetes hysterius is overcome, the moment you tranquilize the stomach and nervous system, by anti-hysteric remedies. Palpitation of the heart is often cured by remedies, which invigorate the stomach and nervous system. I had the pleasure of affording relief to one, a few years since, in a way, perhaps, peculiar to myself. The patient had suffered a long time, was unable to do any business, and several physicians had declared her case incurable. I gave her nothing but the oxyde of zinc, made into a pill with castile soap. After taking this medicinie a few weeks, she resumed her laborious pursuits, and I believe, has continued them ever since. It is worthy of remark, however, that hard labour, or a sudden fright, has since induced a return of the complaint, for a short time.

Let it not be understood, that I view the stomach as the only important organ in the living system. The heart, and the lungs are equally essential to our existence, but endowed with very different functions. While the heart distributes, and receives blood to and from every part of the body, and the lungs absorb both *oxygene* and *caloric* from the atmosphere, yet both have an associate action with the stomach. The stomach, in fact, by means of its vast nervous influence and connection, exercises a sort of dominion over all the other viscera. Like the heart, which acts as the centre of cir-

ulation through the blood vessels, the stomach sits enthroned in the nervous system, and is the centre of association. These are dependent on the brain and lungs, and the brain and lungs, are dependent on these. When we contemplate this mutual dependence and influence, and the agency of the spirit which animates the whole, we are astonished at the incomprehensible nature of ourselves, we "*stand still, and consider the wondrous works of God.*" We perceive that this nice balance must have been adjusted by Him who alone governs the "*balancings of the clouds.*" "*Who stretcheth out the north over the empty place, and hangeth the earth upon nothing.*"

While we cherish the love of life, we ought to be inspired with gratitude and devotion to Him who formed the heart and stomach, with such wonderful powers, and yet so little liable to organic derangement from diseases !

I have said, the stomach exercises a sort of dominion over the surrounding viscera. But, like a king amidst a suffering people, it is compelled to partake of the sufferings around it. This is remarkably exemplified in hysteria. Whenever the uterine system suffers, whether from plethora, or local debility, the stomach suffers also. Hence the throat, and whole nervous system, are often drawn into spasmodic convulsions. I derive great consolation, however, from the effect of a new discovered remedy for this disease. This remedy is the *ergot*. By a quick operation upon the stomach, it produces an immediate calm, amidst these dreadful hurricanes of the delicate female system. This remedy should be in the hands of every practitioner. It is a valuable acquisition to our *materia medica*. Hitherto, it has been employed, principally, to accelerate parturition. But its use, is liable to much abuse. A large dose of it in hysteria is less dangerous, but it commonly creates some distress and nausea. I have employed it in this way about six years. In all forms of hysteria, it proves equally efficacious. I know of no other specific to produce uterine excitements. In some cases, this excitement must be kept up till a suitable tone is established in the stomach and nervous system, by tonic remedies, so as to prevent a .

recurrence of the disease. With this object in view, I have given two or three doses a day, in some cases, for several weeks. I could never perceive any deleterious effects from its continued use. This fact is better than a thousand arguments, to confute the absurdity of some of our New-England philosophers, who have ascribed our late epidemic fever to this substance, when it happens to be in bread. Such wide spread terror, has pervaded our land, by these strange conjectures, that I should not be surprised, if some panic struck Legislature, should pass a law prohibiting the sale of grain, containing this article. The government of Portugal once issued an edict, prohibiting any physician from letting blood in pleurisy from the side affected. *Wilson p. 234.* There has been a time, when he who gave an antimonial emetic, in Rome, was punishable with death. I trust, brethren, we feel a grateful sense of the liberality of our honorable legislature, and that their patronage of medical science, in this state, will ever command both our homage and our gratitude.

Although the preceding remarks have occupied much more time than I had intended, I beg leave to close, by stating a few facts relative to the analogous effects of certain substances, on the stomach, and on remote parts, as employed in surgery.

In every case of external inflammation, *cold water*, when applied, affords the most agreeable sensations, and in modern practice, is often successful in the cure. Nothing need be said on the internal use of cold water in relieving thirst and fever. When inflammation advances to suppuration, no application is more pleasant than warm bread and milk.

I say nothing on the internal use of this first food of mortals. When suppuration terminates in open ulcer, the acetate of lead, and sulphate of copper, have long proved useful, in promoting absorption, in restoring action, and effecting a cure.

Both these remedies, by their tonic effect on the stomach, have cured epilepsy. In recent wounds, some surgeons apply spirit and water with the best success. Perhaps, if more of this remedy were to be applied externally, and less upon the stomach, it might be more conducive to the moral and physical happiness of mankind. The oil of cloves, when applied to recent wounds, has proved the most useful remedy, I have ever employed. However pungent it appears upon the tongue, it gives little or no uneasiness, when dropped in-

to a wound. If the divided parts be nicely adjusted and sutured, a union is commonly effected without inflammation. Both this, and the oil of cinnamon, relieve many cases of toothache. Every one knows the universal pleasant effects of these essential oils, upon the tongue and stomach. Our intelligent citizens take away "*the grief of a wound*," from a rusty nail, by applying *fat pork*. When the remedy can be obtained, you all know the use of it, in taking away the pain of hunger. They sometimes apply animal gall, for the same purpose. Unless this bitter principle, be in the alimentary canal, health decays, and life departs. Do we sometimes prevent a lockjaw, by the internal use of mercury, when the tendons are wounded? I have accomplished the same thing, by applying mercury, to the wounded tendon itself.

In many parts of New-England, the discerning people apply to almost every recent wound, a portion of sugar, moistened with ardent spirit. I have witnessed the effect in wounds of considerable extent, and have seen a union of the divided parts, with very little inflammation, or suppuration.

My philosophic hearers, need not be informed of the agreeable sensations which arise, when the stomach is suitably stimulated by *sugar and rum*. Such, my brethren, is the beautiful symmetry of the human form!

We every where discover a unity of action, and a unity of effect. We perceive a system of nerves, which has a circle and a centre. The brain and the surface constitute the circumference, and the stomach the centre. Here we see the principal seat of every passion, and, by means of sympathy, of every pleasure, and of every pain. To preserve and prolong this pleasure, during the will of Him who made "*man in his own image*," and to alleviate the pain, which, in His providence, He inflicts, is the business of our profession. To increase our skill in this important knowledge, we are associated by a law of our land.

May our liberal patrons be repaid, by a wise application of our skill, and may our own reward be as lasting, as our efforts are laudable.